

### Remarks

The Office Action dated August 1, 2006 has been carefully considered. Claims 1-8 and 17-32 remain in the case with none of the claims indicated allowable. Independent Claim 17 is currently amended.

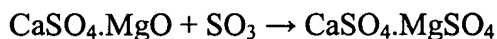
### 35 U.S.C. § 102(b) Rejections

Claims 1-8 and 17-32 were rejected under 35 U.S.C. § 102(b) as anticipated by United States Patent No. 4,824,441 ("Kindig"). Those rejections are respectfully traversed.

Regarding Claims 1-8, Kindig does not disclose *maintaining the reducing environment for a sufficient time period such that reducible acids are reduced to a predetermined level to achieve a desirable acidity concentration in the flue gas*. The Office argues that Kindig discloses:

[M]aintaining the reducing environment for a sufficient time period such that reducible acids are reduced to achieve a desirable acidity concentration in the flue gas (see at least col. 12, line 54 through col. 13, line 23, note particularly equation 7)(Emphasis added).

Kindig's Equation 7 provides:



Equation 7 shows the reaction of a magnesium-based sorbent with a sulfur trioxide, i.e. it shows an oxidizing agent ( $\text{CaSO}_4 \cdot \text{MgO}$ ) binding  $\text{SO}_3$  by oxidizing  $\text{SO}_3$ . While Kindig's method may reduce the total *amount* of  $\text{SO}_3$  by binding through redox chemistry, Kindig does not reduce, or add an electron to,  $\text{SO}_3$ . Kindig uses a different method to achieve a similar result. Applicant believes this distinction address the Office's concerns regarding binding/oxidation verses reduction. For at least this reason, it is respectfully submitted that Claims 1-8 are not anticipated by Kindig.

The Office also argues that Applicants' predetermined level is met by Kindig's "particular sulfur reduction target" as disclosed in Kindig's col. 15, lines 4-7.

Kindig's "particular sulfur reduction target" is not Applicant's predetermined level. Kindig discloses that:

"There are two components to sulfur reduction: removing sulfur containing materials prior to combustion of coal and removing sulfur oxides from combustion gases with sorbents. A particular sulfur reduction target can be met by varying the sulfur reduction between these two components." (col. 15, lines 1-7).

Neither Kindig's "removing sulfur containing materials" nor Kindig's "removing sulfur oxides from combustion gases with sorbents" relates to the reduction, or addition of an electron, to a reducible acids. Kindig does not disclose specifically its "method of removing sulfur containing materials prior to combustion of coal". Rather, in light of the rest of the references, suggests a physical separation rather than the claimed redox reduction. Kindig's "removing Kindig sulfur oxides from combustion gases with sorbents" is, as discussed above, an oxidation, not a reduction. Again, Kindig uses a different method to achieve a similar result.

Kindig is not concerned with reducing, in terms of redox chemistry, to a predetermined level. Kindig does not reduce for a *sufficient time period such that reducible acids are reduced to a predetermined level* because Kindig oxidizes to reach its particular sulfur reduction target. For at least this reason, it is respectfully submitted that Claims 1-8 are patentable over Kindig.

### 35 U.S.C. § 103 Rejections

Claims 17-32 were rejected as obvious under Kindig in view of United States Patent No. 4,196,057 ("May"). Applicant disagrees.

Kindig does not disclose applicant's *adjusting the reducing environment for a sufficient time period such that the flue gas acid dewpoint is lowered to a desirable level by reducing reducible acids* (Claim 17 and its dependants) or applicant's *decreasing the acid dewpoint*

*temperature of the flue gas by reducing the reducible acid concentration of the gas* (Claim 25 and its dependants). Kindig as noted above, oxidizes to increase the formation of sulfur trioxide and then uses an oxidizer to bind sulfur trioxide. While Kindig may, ultimately lower acid due point, Kindig does not do so using the claimed method. May is unable to fill in this void.

For at least this reason, it is respectfully submitted that Claims 17-24 are patentable over the cited combination of references.

Applicant submits that by this amendment, he has placed the case in condition for allowance and such action is respectfully requested. However, if any issue remains unresolved, Applicant's attorney would welcome the opportunity for a telephone interview to expedite resolution of any outstanding issues.

Respectfully submitted,



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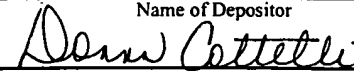
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